Remarks/Arguments:

A. Status of the Claims

Claims 1 and 9 are amended herein. Support for the claim amendments is found at page 7, line 27, through page 8, line 5, of the application as originally filed. No new matter has been introduced.

Claims 1-3, 7, and 9 remain pending and under examination. Claims 11 and 12 are withdrawn from consideration. Claims 4-6, 8 and 10 have been cancelled.

B. Rejection of Claims 1-3, 7, and 9 under 35 U.S.C. §103

Applicant traverse the rejection of Claims 1-3, 7, and 9 under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,330,816 (hereafter, "the Rusek Reference") in view of U.S. Pat. No. 3,523,803 (hereafter, "the Haslay Reference"). Reconsideration and withdrawal of the rejection are respectfully requested in view of the claim amendments and arguments presented herein.

Applicant's invention, as recited in Claim 1, is directed to a vacuum heat insulator. The vacuum heat insulator is comprised of the following components:

> a core formed of a laminated body where glass fibers are laminated in a thickness direction of the vacuum heat insulator,
>
> wherein the glass fibers contain an alkali content of at least 0.8% and at most 20% in weight, and the average diameter of the glass fibers is 3.5 μM; and
>
> an enveloping member covering the core and having gas barrier property.

The core is heat-pressed at a temperature of 480 °C for 5 minutes, such temperature being lower than the strain point of the glass fibers and insufficient to cross-link the glass fibers through necks formed between the glass fibers. The core is molded so that the laminated body has a density of 100 kg/m^3 to 400 kg/m^3 and a shape of the core during heat-press is kept by an anchor effect due to entanglement of parts of the glass fibers instead of binding of the glass fibers and an effect in which the glass fibers are drawn by heat deformation of the glass fibers. The glass fibers are not cross-linked through necks formed between the glass fibers.

Claim 9 (the only other independent claim pending in the application) is directed to a hot-insulation cold-insulation apparatus which comprises a vacuum heat insulator of the type recited in Claim 1.

In Paragraph 3 of the Detailed Action which accompanied the Office Action mailed August 11, 2009, the Examiner takes the position that the Rusek Reference discloses a binderless core. He further comments that: "In view of the lack of the use of a binder in Rusek's core and the fact that Rusek's core is not heated to the softening point of the glass fibers, the fibers in the core of Rusek will not be cross-linked through necks formed between the glass fibers and thus meets the limitation set forth in the last three lines of claim 1." Applicant respectfully submits that the Examiner's interpretation of the Rusek Reference disclosure is in error. The Rusek Reference teaches that the glass fibers should be heated above the strain temperature of the glass fibers. See the Abstract and Column 2, lines 52-60. Applicant note that the phrase "strain temperature" used in the Rusek Reference has the same meaning as the phrase "strain point" that is employed in the context of the present application. Applicant's invention utilizes a heat-pressing temperature that is less than the strain temperature (strain point) of the glass fibers. The use of such lower temperature would not have been obvious to a person of ordinary skill in the art from the Rusek Reference, which emphasizes the need to use a higher temperature (i.e., a temperature above the strain temperature/strain point) to achieve a satisfactory result.

The Examiner's attention is directed to the Declaration of the Applicant which was submitted to the Office on August 4, 2008 (a courtesy copy of the Declaration is attached herewith as Exhibit A). The Declaration establishes that "[m]olding temperatures at and above 520°C cause the glass fibers to melt at cross points and yields cores that exhibit increased heat conductivity." See page 3, second paragraph, of Declaration. The strain temperature (strain point) of the C-type glass fibers used in the molding process that is described in the Declaration was 525°C. Thus, using a heat-pressing temperature above the strain temperature (strain point) but below the softening temperature of the glass fibers (as recommended by the Rusek Reference) results in a core where necks are formed between the glass fibers. This observation refutes the Examiner's position that no cross-linking between the glass fibers could be taking place in the process taught by the Rusek Reference since the pressing temperature is below the softening temperature.

The Haslay Reference similarly does not teach or suggest heat-pressing glass fibers at a temperature of 480 °C for 5 minutes, wherein the temperature is lower than the strain point of

the glass fibers, thereby yielding a molded core having glass fibers that are not cross-linked through necks formed between the glass fibers. It therefore fails to cure the deficiencies of the Ruzek Reference. Applicant respectfully submits that a *prima facie* showing of obviousness has not been established and that his invention therefore is patentable over the prior art relied on by the Examiner in the Office Action.

In view of the amendments and arguments set forth above, the present application is believed to be in condition for allowance. If any issues or concerns still exist, the Examiner is invited to contact Applicant's attorney at the telephone number shown below.

Respectfully submitted,

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Attachments: Exhibit A (4 pages)

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